

Appendix A-6

APPENDIX A-6

LEAK DETECTION AND REPAIR REQUIREMENTS FOR THE MARTINEZ NON-PETROLEUM REFINERY FACILITY

A. General LDAR Provisions

1. Definitions. Except as expressly set forth elsewhere in this Consent Decree, the terms used in this Appendix A-6 shall have the meaning given to those terms in this Appendix or in Section IV of this Consent Decree; or, if not defined in this Consent Decree, as defined in the Clean Air Act and the implementing regulations promulgated thereunder.

“Covered Equipment” shall mean all pumps and valves (excluding pressure relief devices and check valves), in light liquid or gas/vapor service in all Covered Process Units.

“Covered Process Unit” shall mean any process unit that is, or under the terms of this Consent Decree becomes, subject to the equipment leak provisions of 40 C.F.R. Part 63, Subpart FFFF; and shall mean any affected source that is, or under the terms of this Consent Decree becomes, subject to the equipment leak provisions of 40 C.F.R. Part 63, Subpart EEEE.

“Equipment” shall mean any equipment as defined in 40 C.F.R. § 63.2550; and shall mean any component included in the definition of “equipment leak component” in 40 C.F.R. § 63.2406.

“In gas/vapor service” shall have the definition set forth in the applicable provisions of 40 C.F.R. § 63.1020.

“In light liquid service” shall have the definition set forth in the applicable provisions of 40 C.F.R. § 63.1020.

“LDAR Audit Commencement Date” shall mean the first Day of the on-site inspection that accompanies an LDAR audit pursuant to Section C of this Appendix A-6.

“Maintenance Shutdown” shall mean a Shutdown of a Covered Process Unit that lasts longer than 30 Days.

“Process Unit Shutdown” means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit, or part of a process unit, consistent with safety constraints, and during which repairs can be accomplished. The following are not considered Process Unit Shutdowns: (i) an unscheduled work practice or operational procedure that stops production from a process unit or part of a

process unit for less than 24 hours; (ii) an unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled Process Unit Shutdown; and (iii) the use of spare equipment and technically feasible bypassing of equipment without stopping production.

2. The requirements of this Appendix A-6 shall not apply to compressors at the Martinez NPR Facility.

3. Beginning on the date that any particular process unit becomes subject to the requirements of 40 C.F.R. Part 63, Subpart FFFF, or any particular affected source becomes subject to the requirements of 40 C.F.R. Part 63, Subpart EEEE, it shall be subject to and comply with the requirements of this Appendix A-6.

4. Nothing in this Appendix A-6 shall relieve Tesoro of its independent obligation to comply with the requirements of any other federal, state, or local LDAR regulation that may be applicable to equipment at the Martinez NPR Facility.

5. Tesoro shall implement and comply with the requirements of this Appendix A-6 for all Covered Equipment at the Martinez NPR Facility by the dates specified herein and shall continue to comply with the requirements of Appendix A-6 until Termination. The requirements of Appendix A-6 are in addition to, and not in lieu of, the requirements of any federal, state, or local LDAR regulation that may be applicable to a piece of Covered Equipment. If there is a conflict between a federal, state, or local LDAR regulation and Appendix A-6, Tesoro shall follow whichever regulation is more stringent.

B. Facility-Wide LDAR Program and Training

6. Written LDAR Program. On an annual basis, Tesoro shall review its written facility-wide LDAR Program and update it as needed no later than December 31 of each year. The written facility-wide LDAR Program for the Martinez NPR Facility shall describe: (i) the facility-wide LDAR program for the Martinez NPR Facility (e.g., applicability of regulations to process units and/or specific Equipment; leak definitions; monitoring frequencies); (ii) a tracking program (e.g., “Management of Change”) that ensures that new pieces of Equipment added to the Martinez NPR Facility for any reason are integrated into the LDAR program and that pieces of Equipment that are taken out of service are removed from the LDAR program; (iii) the roles and responsibilities of all employee and contractor personnel assigned to LDAR functions at the Martinez NPR Facility; (iv) the basis for Tesoro’s determination that the number of personnel dedicated to LDAR functions is sufficient to satisfy the requirements of the LDAR program; and (v) how the Martinez NPR Facility plans to implement this LDAR Program.

7. Training. Tesoro shall implement the following training programs:

a. By no later than the date Tesoro submits the Notice of Conversion under Paragraph 59 of this Consent Decree, for any employee newly assigned to LDAR responsibilities, Tesoro shall require that each such employee satisfactorily complete LDAR training prior to beginning any LDAR work;

b. By no later than the date Tesoro submits the Notice of Conversion under Paragraph 59 of this Consent Decree, for all the Martinez NPR Facility's employees assigned specific LDAR responsibilities as a primary job function, such as monitoring technicians, database users, Quality Assurance ("QA")/Quality Control ("QC") personnel, and the LDAR Coordinator, Tesoro shall provide and require completion of initial training before the employee begins LDAR responsibilities and annual LDAR refresher training thereafter;

c. By no later than the date Tesoro submits the Notice of Conversion under Paragraph 59 of this Consent Decree, for all employee operations and maintenance personnel, who have duties relevant to LDAR, such as operators and mechanics performing valve repacking and designated unit supervisors reviewing DOR work, Tesoro shall provide and require completion of an initial training program that includes instruction on aspects of LDAR that are relevant to the person's duties. Refresher training for these personnel shall be performed every three years; and

d. If contract employees are performing LDAR work, Tesoro shall maintain copies of all training records, as required under this Paragraph, for the contract employees.

C. LDAR Audits

8. LDAR Audits. Tesoro shall conduct a third-party or internal LDAR audit at the Martinez NPR Facility every other year pursuant to the requirements of Paragraphs 9 through 14 of this Appendix A-6.

9. Third-Party Audits. Tesoro shall retain a third party with experience in conducting LDAR audits to conduct the initial LDAR audit under this Appendix A-6 at the Martinez NPR Facility. Third parties shall be utilized at least every four years for any subsequent required audits until Termination of this Consent Decree. To perform the third-party LDAR audit, Tesoro shall select a different company than its regular LDAR contractor with expertise in LDAR program requirements. The first third-party LDAR Audit Commencement Date for the Martinez NPR Facility shall occur by the end of the Calendar Quarter in which Tesoro submits the Notice of Conversion under Paragraph 59 of this Consent Decree. Subsequent audits shall occur within the fourth Calendar Quarter on a biennial basis until Termination of this Consent Decree pursuant to Section XXI (Termination).

10. Internal LDAR Audits. In years in which Tesoro is not required to retain a third-party auditor, Tesoro may conduct an LDAR audit internally by using its own personnel, provided that the personnel Tesoro uses are not employed at the Martinez NPR Facility but rather are employed at a refinery owned or operated by Tesoro that at the time of the audit uses Certified

Low-Leaking Valve and/or Certified Low-Leaking Valve Packing Technology. All such internal LDAR audits shall be conducted by personnel familiar with regulatory LDAR requirements and the LDAR requirements of this Appendix A-6. At its discretion, Tesoro may use a third-party auditor in lieu of conducting these internal LDAR audits.

11. Each LDAR audit shall include, but not be limited to, reviewing compliance with all applicable regulations including valves and pumps in heavy liquid service, reviewing and/or verifying the same items that are required to be reviewed and/or verified in Paragraph 19 of this Appendix A-6, and performing the following activities for Covered Equipment:

a. Calculating a Comparative Monitoring Audit Leak Percentage. Covered Equipment shall be monitored to calculate a leak percentage for each Covered Process Unit broken down by Covered Equipment type (i.e., valves and pumps). The monitoring that takes place during each LDAR audit shall be called “comparative monitoring” and the leak percentages derived from the comparative monitoring shall be called the “Comparative Monitoring Audit Leak Percentage.” Until Termination of this Consent Decree pursuant to Section XXI, Tesoro shall conduct a comparative monitoring audit pursuant to this Paragraph during each LDAR audit. Each Covered Process Unit at the Martinez NPR Facility that is not the subject of the current audit shall have a comparative monitoring audit at least once before a previously-audited Covered Process Unit is audited again.

b. Calculating the Historic Average Leak Percentage from Prior Periodic Monitoring Events. For the Covered Process Unit that is audited, the historic average leak percentage from prior monitoring events, broken down by Covered Equipment type (i.e., valves and pumps) shall be calculated. The following number of complete monitoring periods immediately preceding the comparative monitoring audit shall be used for this purpose: valves - 4 periods if valves are on quarterly cycle or 2 periods if valves are on an annual cycle; and pumps - 12 periods.

c. Calculating the Comparative Monitoring Leak Ratio. For the Covered Process Unit that is audited, the ratio of the Comparative Monitoring Audit Leak Percentage from Paragraph 11.a above to the historic average leak percentage from Paragraph 11.b above shall be calculated (“Comparative Monitoring Leak Ratio”). If a calculated ratio yields an infinite result, Tesoro shall assume one leaking piece of Covered Equipment was found in the process unit through its routine monitoring during the 12-month period before the audit, and the ratio shall be recalculated.

d. In addition to these items, LDAR audits after the first audit shall include reviewing the Martinez NPR Facility’s compliance with the LDAR Program of this Appendix A-6.

12. When More Frequent Periodic Monitoring is Required. If a Comparative Monitoring Audit Leak Percentage calculated pursuant to Paragraph 11.a above triggers a more frequent monitoring schedule under any applicable federal, state, or local law or regulation, Tesoro shall monitor the affected type of Covered Equipment at the greater frequency unless and until less frequent monitoring is again allowed under the specific federal, state, or local law or regulation.

13. Corrective Action Plan (“CAP”).

a. Requirements of a CAP. By no later than thirty (30) Days after each LDAR Audit Completion Date, Tesoro shall develop a preliminary CAP if the results of an LDAR audit identify any deficiencies or if the Comparative Monitoring Leak Ratio calculated pursuant to Paragraph 11.c above is 3.0 or higher and a Comparative Monitoring Audit Leak Percentage calculated pursuant to Paragraph 11.a above is 0.5% or higher. The CAP shall describe the actions that Tesoro shall take to correct the deficiencies and/or the systemic causes of a Comparative Monitoring Leak Ratio that is 3.0 or higher. The CAP also shall include a schedule by which those actions shall be undertaken. Tesoro shall complete each corrective action as expeditiously as possible with the goal of completing each action within ninety (90) Days after the LDAR Audit Completion Date. If any action is not completed or is not expected to be completed within ninety (90) Days after the LDAR Audit Completion Date, Tesoro shall explain the reasons in the final CAP to be submitted under Paragraph 13.b below, together with a proposed schedule for completion of the action(s) as expeditiously as practicable.

b. Submissions of the CAP to EPA. By no later than one hundred and twenty (120) Days after the LDAR Audit Completion Date, Tesoro shall submit the final CAP to EPA for approval, together with a certification of the completion of corrective action(s). For any corrective action(s) requiring more than ninety (90) Days to complete, Tesoro shall include an explanation together with a proposed schedule for completion as expeditiously as practicable.

c. Approval/Disapproval of All or Parts of a CAP.

i. Unless within sixty (60) Days after receipt of the CAP, EPA disapproves all or part of a CAP’s proposed actions and/or schedules, the CAP shall be deemed approved.

ii. By no later than sixty (60) Days after receipt of a Tesoro’s CAP, EPA may disapprove any or all aspects of the CAP. Each item that is not specifically disapproved in writing shall be deemed approved. Except for good cause, EPA may not disapprove any action within the CAP that already has been completed. Within forty-five (45) Days of receipt of any disapproval from EPA, Tesoro shall submit a revised CAP that addresses the deficiencies that EPA identified that Tesoro shall implement the revised CAP either pursuant to the schedule that EPA proposed, or, if EPA did not so specify, as expeditiously as practicable.

iii. A dispute arising with respect to any aspect of a CAP shall be resolved in accordance with the dispute resolution provisions of this Consent Decree set forth in Section XV.

14. Certification of Compliance. Within 180 Days after the initial LDAR Audit Completion Date, Tesoro shall submit a certification to EPA that certifies, to the best of the certifier’s knowledge and belief after reasonable inquiry, that: (i) the Martinez NPR Facility is in compliance with all applicable LDAR regulations; (ii) Tesoro has completed all corrective actions, if applicable, or is in the process of completing all corrective actions pursuant to a CAP; and (iii) all Equipment at the Martinez NPR Facility that is regulated under any federal, state, or local leak detection program has been identified and included in the Martinez NPR Facility’s

LDAR program. To the extent that Tesoro cannot make the certification in all respects, it shall specifically identify any deviations from items (i)–(iii).

D. Monitoring Methods

15. Calibration of LDAR Monitoring Equipment. Except as provided below, before each monitoring shift or before monitoring equipment is restarted during a monitoring shift, Tesoro shall calibrate LDAR monitoring equipment as required by 40 C.F.R. Part 63, Subparts EEEE and FFFF in accordance with 40 C.F.R. Part 60, EPA Reference Test Method 21, prior to each time LDAR monitoring equipment is used to monitor Covered Process Units. Tesoro shall conduct calibration drift assessment rechecks of the LDAR monitoring equipment at the end of each monitoring shift and prior to each time LDAR monitoring equipment is turned off during each monitoring shift, except when LDAR monitoring equipment is unable to function such that the calibration drift assessment recheck cannot be performed before the LDAR monitoring equipment turns off. Tesoro is not required to conduct a calibration drift assessment re-check during the same monitoring shift in the event of a “flame-out” of the instrument if the instrument can be promptly re-ignited. The calibration drift assessment shall be conducted using calibration gas as provided in 40 C.F.R. § 63.1023(b)(2)-(4) with a concentration approximately equal to the applicable internal leak definition. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, Tesoro shall re-monitor all components monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100). Tesoro shall retain all calibration records for at least one year, or as otherwise required by any federal, state, or local law, whichever is most stringent.

E. Delay of Repair

16. Tesoro shall require the following for Covered Equipment placed on the DOR list:

a. Sign-off from the plant manager, a Tesoro official responsible for environmental management and compliance, a Tesoro official responsible for plant engineering, an operations manager, or an area supervisor that the piece of Covered Equipment is technically infeasible to repair without a Process Unit Shutdown;

b. Periodic monitoring, at the frequency required for other pieces of Covered Equipment of that type in the process unit, of the Covered Equipment placed on the DOR list;

c. No more than 0.10% of all valves in all Covered Process Units may be on the DOR list at any one time. If a valve is: (i) isolated and taken out of VOC and/or HAP service at the same time it is placed on the DOR list and is repacked with Certified Low-Leaking Valve Packing Technology or is replaced with Certified Low-Leaking Valves before it is placed back into VOC and/or HAP service; or (ii) scheduled to be repacked with Certified Low-Leaking Valve Packing Technology or replaced with Certified Low-Leaking Valves at the next Maintenance Shutdown, such valve shall not be included in computing the applicable percentage limitation of valves that may be on the DOR list at any one time; and

d. Covered Equipment may be removed from the DOR list if it is monitored at the frequency required for other pieces of Covered Equipment of that type in the process unit for two successive monitoring periods without detecting a leak greater than (i) 500 ppm VOCs for valves; (ii) 2,000 ppm VOCs for pumps; or (iii) the lower leak definition of any applicable permit, regulation, or law for that type of Covered Equipment.

F. Tracking Program or Management of Change

17. For each Management of Change process or analysis or other tracking program, Tesoro shall ensure that each piece of Equipment added to the Martinez NPR Facility or removed from the Martinez NPR Facility for any reason is evaluated to determine if it is or was subject to LDAR Program requirements of this Appendix A-6 and that such pieces of Equipment are integrated into or removed from the LDAR Program of this Appendix A-6.

G. Quality Assurance (“QA”)/Quality Control (“QC”)

18. Daily Certification by Monitoring Technicians. Commencing no later than the date Tesoro submits the Notice of Conversion under Paragraph 59 of this Consent Decree, on each Day that monitoring occurs, at the end of such monitoring Day to the extent practical, but in no case later than the next Working Day for the monitoring technician, Tesoro shall ensure that each monitoring technician certifies that the data collected represents the monitoring performed for that Day by requiring the monitoring technician to sign a form that includes the following certification:

On [insert date], I reviewed the monitoring data that I collected on [insert date] and to the best of my knowledge and belief, the data accurately represents the monitoring I performed.

In lieu of a form for each technician for each Day of monitoring, a log sheet may be created that includes the certification that the monitoring technicians would date and sign each Day that the technician collects data.

19. Commencing no later than the date Tesoro submits the Notice of Conversion under Paragraph 59 of this Consent Decree, during each Calendar Quarter, at unannounced times, an LDAR-trained employee or contractor of Tesoro, who does not serve as an LDAR monitoring technician on a routine basis, shall undertake the following:

- a. Process unit walk-throughs as may be necessary to assure that all Covered Process Units are reviewed at least once per year, conduct spot checks of Covered Equipment to verify that the Equipment checked is included in the LDAR database and is properly tagged;
- b. Review the LDAR database to:
 - i. verify that Covered Equipment was monitored at the appropriate frequency;
 - ii. verify that proper documentation and signoffs have been recorded for all Equipment placed on the DOR list;

- iii. ensure that repairs have been performed within the required timeframe;
 - iv. review monitoring data and Equipment counts (e.g., number of pieces of Covered Equipment monitored per Day) for feasibility and unusual trends; and
 - v. verify that proper calibration records and monitoring instrument maintenance information are stored and maintained;
- c. Conduct spot checks of LDAR program records to verify that those records are maintained as required in Paragraph 21 of this Appendix A-6; and
 - d. Observe each LDAR monitoring technician in the field to ensure monitoring is being conducted as required.

20. Tesoro shall correct any deficiencies detected or observed as soon as practicable. Tesoro shall maintain a log that: (i) records the date and time that the reviews, verifications, and observations required by Paragraph 19 of this Appendix A-6 were undertaken; and (ii) describes the nature and timing of any corrective actions taken.

H. Recordkeeping and Reporting at the Martinez NPR Facility

21. Tesoro shall keep all records, including copies of all LDAR audits, to document compliance with the requirements of this LDAR requirements of this Appendix A-6 in accordance with Section X (Reporting and Recordkeeping) of this Consent Decree. All monitoring data, leak repair data, training records, and audits shall be retained for five (5) years, except for the calibration records (including calibration drift assessments) which shall be retained for one (1) year. Upon request by EPA, Tesoro shall make all such documents available to EPA and shall provide, in their original electronic format, all LDAR monitoring data generated during the life of this Consent Decree.

22. Compliance Status Reports. On the dates and for the time periods set forth in Paragraph 23 of this Appendix A-6, Tesoro shall submit a compliance status report regarding compliance with the LDAR requirements of this Appendix A-6. The compliance status report shall include the following information:

- a. The number of personnel assigned to LDAR functions at the Martinez NPR Facility and the percentage of time each person dedicated to performing his/her LDAR functions;
- b. An identification and description of any non-compliance with the LDAR requirements of this Appendix A-6;
- c. An identification of any problems encountered in complying with the requirements of this Appendix A-6;
- d. A description of any LDAR training required in accordance with Paragraph 7 of this Appendix A-6;

e. Any deviations identified in the QA/QC performed under Paragraphs 18 and 19 of this Appendix A-6 as well as any corrective actions taken under Paragraph 20 of this Appendix A-6;

f. A summary of LDAR audit results including specifically identifying all deficiencies; and

g. The status of all actions under any CAP that was submitted pursuant to Paragraph 8 of this Appendix A-6 during the reporting period.

23. Due Dates. Until Termination, Tesoro shall submit compliance status reports on each March 1 and September 1 for the preceding six-month period. Semi-annual compliance status reports shall cover the time period from January 1 through June 30 of each year (submitted by September 1 of each year) and the period of July 1 through December 31 of each year (submitted by March 1 of each year).

24. Each compliance status report submitted under Paragraph 22 of this Appendix A-6 shall be certified as set forth in Paragraph 173 of the Consent Decree.